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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/644,793	08/24/2000	Jyoji Mishina	K-1825CIP2	2913

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Kanesaka and Takeuchi
1423 Powhatan Street
Alexandria, VA 22314

EXAMINER

BUCHANAN, CHRISTOPHER R

ART UNIT

PAPER NUMBER

2167

DATE MAILED: 02/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/644,793	Applicant(s) MISHINA ET AL.	
	Examiner Christopher R Buchanan	Art Unit 2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 7-13, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saderholm et al. in view of Hirai.

With regard to claim 1, Saderholm discloses an airbag (24, Fig. 2) with a first panel (10) and a second panel (11) that are connected along their peripheral portions by sewing yarn (17, 23) or any other suitable means (col. 3 line 38). With regard to claims 7 and 8, the yarn comprises a first seam (17) positioned outside of a second seam (23), wherein the second seam is broken during inflation of the airbag (see Figs. 2 and 3, col. 4 line 8+).

The airbag of Saderholm differs from the claimed invention in that it does not show the panels to be connected with an elastic adhesive [claim 1], the adhesive to have an elongation of more than 200% [claim 2], the adhesive to be a silicone or urethane adhesive [claims 3 and 4], the seam on the peripheral portions of the airbag panels to be covered by sealant [claim 9], the amount of adhesive applied to be from 0.01 to 0.05 g/m² [claim 10], the adhesive to be room temperature vulcanizing (RTV) silicone rubber [claim 11], the panels to be made of synthetic resin woven fabrics [claim

12], the adhesive to be stretchable [claim 13], the thickness of the adhesive to be uneven and thickest in areas of largest stress [claims 15 and 16].

With regard to claim 1, Hirai discloses an airbag (1, Fig. 2) with a first panel (3) and a second panel (2) that are connected along their peripheral portions by an elastic adhesive (5, see abstract). With regard to claims 2-4, 11, and 13, the adhesive can be a number of soft thermoplastic elastomers, such a urethane (col. 3 line 37). Silicone and RTV silicone rubber are other thermoplastic elastomers that are well known in the art and it is well known that these elastomers are soft, flexible, and stretchable to a high degree (col. 1 line 7+, col. 3 line 37+). With regard to claim 12, Hirai states that airbag panels are conventionally made of synthetic resin woven fabrics (col. 1 line 7). With regard to claims 15 and 16, Harai notes (col. 1 line 18, col. 3 line 19) that a uniform thickness of adhesive results in a bond of uniform strength. It would be obvious to one skilled in the art to vary the thickness of the adhesive to create a bond of the desired strength.

It would be obvious to one skilled in the art to modify the airbag of Saderholm to include panels connected with an elastic adhesive, to make the adhesive a thermoplastic elastomer, such a urethane, to make the panels of synthetic resin woven fabrics, and to make the thickness of the adhesive uneven and thickest in areas of largest stress, as taught by Hirai, to provide a means for increasing the strength of the connection between airbag panels.

Saderholm et al. in view of Hirai disclose the claimed invention except for adhesive disposed between the inner peripheral surfaces of the airbag panels and a

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yarn sewn along the peripheral portion through the adhesive to connect the panels [claim 1], the seam on the peripheral portions of the airbag panels to be covered by sealant [claim 9] and the amount of adhesive applied to be from 0.01 to 0.05 g/m² [claim 10]. With regard to claims 1 and 9, applicant's prior art shown in Fig. 4b shows the seam (3) on the peripheral portions of the airbag panels (1', 2') to be covered by sealant (4) (application page 1 line 23+) and to have a yarn (3') sewn along the peripheral portion through the sealant to connect the panels. It would be obvious to one skilled in the art, especially in view of Hirai and applicant's prior art, that adhesive could also be disposed between the inner peripheral surfaces of the airbag panels to help hold the panels together. With regard to claim 10, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the amount of adhesive applied to be from 0.01 to 0.05 g/m², since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272,205 USPQ 215 (CCPA 1980). Furthermore, considering the adhesive amounts disclosed on page 5 of the translation of Japanese patent 10-102029, one skilled in the art could infer the amounts claimed in claim 10.

3. Claims 5, 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saderholm et al. in view of Hirai further in view of Gray et al.

Saderholm et al. in view of Hirai disclose all the features of the claimed invention except for at least one of the panels to be coated with a silicone or urethane coating

[claims 5 and 6] and the adhesive to be applied outside and in the vicinity of the seam [claim 14].

Gray discloses an airbag (1, Fig. 2) wherein at least one of the panels (8, 10) is coated with a with a polymerized resin coating (16, Fig. 3, col. 13 line 39). As discussed above the coating could be a silicone or urethane coating. The coating is applied outside and in the vicinity of the seam (see Fig. 3, col. 13 line 47).

It would be obvious to one skilled in art to modify the airbag of Saderholm et al. in view of Hirai so that at least one of the panels is coated with a silicone or urethane coating and the adhesive is applied outside and in the vicinity of the seam, as taught by Gray, to provide reinforcement for the airbag panels.

Response to Arguments

4. Applicant's arguments filed December 11, 2002 have been fully considered but they are not persuasive. With regard to claim 1, applicant's prior art shown in Fig. 4b shows the seam (3') on the peripheral portions of the airbag panels (1', 2') to be covered by sealant (4) (application page 1 line 23+) and to have a yarn (3') sewn along the peripheral portion through the sealant to connect the panels. It would be obvious to one skilled in the art, especially in view of Hirai and applicant's prior art, that adhesive could also be disposed between the inner peripheral surfaces of the airbag panels to help hold the panels together. Given this structure, upon inflation of the airbag the sealant would be pulled outwardly to absorb the expansion force.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R Buchanan whose telephone number is 703-306-5782. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Olszewski can be reached on 703-308-5183. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

CRB

Christopher Buchanan
February 11, 2002

[Signature] 2/19/02
Kenneth R. Rice
Primary Examiner